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Real Estate Economists, Appraisers and Counselors

SERVICE STATION CONSTRUCTION COSTS

THIS is the second of a series of bulletins on the appraisal of service stations. The first was published in June of this year, and was entitled "Problems in Appraising Service Stations." This month's bulletin will deal with the costs of reproducing the service station and its improvements, as this is the key to the summation approach to value.

We have found that the value concluded by the summation approach in some appraisals has been too low. The reason for this has been primarily the fact that many of the so-called minor though expensive yard improvements have been omitted.

The construction costs of service stations have risen to such an extent in recent years that the gasoline distributing business of the major oil companies as well as many of the so-called cut-rate firms has gone to proportionately fewer but larger service stations. Since the end of World War II the number of service stations in existence has remained fairly constant, despite the fact that the number of automobiles on the street today has increased substantially. In order to serve the increased automobile population it has been necessary to increase the size of the stations as long as the policy has been to retard the number of stations because of the high construction costs. This postwar era has been characterized by a tremendous increase in cut-rate stations, particularly those with numerous pumps. These multipump stations generally have many more pumps than they have employees to service them. Nevertheless, they do serve a psychological purpose in that the impatient American motorist can drive up to a pump without waiting in line. Despite this fact, many customers have to wait equally as long to get service because of the lack of manpower.

The service station structure varies considerably, ranging from the economy-priced, small office station without service facilities to the large, elaborate self-service station with extensive service facilities. We believe that the trend in service station operations shortly will be to limited services, as the major oil companies which own a large percentage of the service stations in this country and lease them to the operator receive but little benefit from the investment that they have in the high-priced lubritorium and service bays. Since their lease to the operator is primarily based on a gasoline gallonage basis, the benefits derived from the lubritoriums, wash racks, etc., by the owners are small. Practically all of

the cut-rate stations offer merely the sale of gasoline and oil and do not solicit grease jobs or other service facilities.

BUILDING COSTS: Even the smallest and least expensive of the service stations have a high unit cost because of their semifireproof construction and their small size, and the facilities contained therein. It is necessary to bear in mind that the smaller the station structure, the higher the unit construction cost will be because of its wall ratio (relationship of perimeter to area), all other things being equal. The station that contains office space and lavatories only (two lavatories of two fixtures each), which would contain approximately 400 square feet, would cost as a minimum \$14 per square foot. This is the cost for an 8" concrete block building with no interior finish and but a waterproof paint applied to the exterior, having a built-up roof, a concrete floor and a small unit heater. This is typical of the inexpensive structures serving the cut-rate stations. The price includes painting, heating, interior electrical and plumbing costs. The average cost of a major company-owned station which contains office and lavatory space only would run between \$19 and \$20 per square foot, and its size would average between 475 and 500 square feet. This station is of concrete block and semifireproof construction, but in addition is of better grade construction than the minimum type of station. Greater amounts are spent for decorating, and these stations contain stone ornamental trim with plate glass extensively used. Costs may exceed \$22 or \$23 per square foot on extremely lavish office structures.

The two-bay service station, which is the most popular of modern stations, will vary in cost from \$10.50 per square foot to \$14 per square foot, depending on the quality of construction, the ornateness of design, as well as on the type of construction (concrete block, metal, brick, or stone). The average costs, however, run between \$12 and \$13 per square foot. These stations average in size from 1,300 to 1,500 square feet. Again, one must keep in mind the wall ratio, the square building being the most economical structure as it includes the greatest area with the minimum amount of wall space.

PAVING COSTS: Listed below are the costs of paving that would apply during nonfreezing weather only. The costs of laying concrete or black top would be considerably higher during periods of extremely cold weather.

6" reinforced concrete drive . . .	65¢ per sq. ft.
5" reinforced concrete drive . . .	55¢ per sq. ft.
Asphalt paving	25¢-30¢ per sq. ft.
4" concrete walks	40¢-50¢ per sq. ft.
6" concrete curbs	\$2 per linear foot
Crushed rock parking area	7¢ per sq. ft.

PUMP ISLANDS: Concrete pump islands vary somewhat in size, and the cost would vary proportionately. However, we are giving average costs of pump islands:

2-pump	\$130
3-pump	150
4-pump	200

PUMPS: The costs listed below do not include the costs of installation, freight or wiring. There is an average of \$5 setting charge for uncrating and placing the pump into position. The cost of installing the pumps, which includes bolting down, wiring and testing, will run approximately \$40 per pump. The noncomputing pumps will cost approximately \$330, the computing pumps will run approximately \$350, while the low-boy computing pumps will run \$375. Pumps with the hose reel attachments will run approximately \$400 in cost.

YARD WORK: This is an item that is very often omitted in computing the cost of a service station, despite the fact that yard improvement costs are quite sizable. The cost of installing the electrical work for a 3-pump station will average about \$450, for a 4-pump station \$475, for a 6-pump station \$700, and for an 8-pump station \$850.

The yard plumbing, which includes water, sewers, gasoline lines and air lines, will run about \$600 for a 3-pump station, \$675 for a 4-pump station, \$800 for a 6-pump station, and \$950 for an 8-pump station.

In the event that it is necessary to install a septic tank, an expenditure of approximately \$1,000 to \$1,500 is necessary, depending on the soil conditions.

TANKS: The cost of the tanks will vary but little from area to area, but the installation cost will vary greatly depending on the emplacement of these tanks, whether underground or above ground, vertical or horizontal, and on the soil conditions. In the event that any underground stone is encountered, the costs given would not apply. The underground installation costs include a sand backfill around the tank which will minimize the action of electrolysis, and in turn lengthen the life of the tank.

In some instances the tanks are anchored into position to prevent their floating to the surface when they are relatively empty and the ground becomes moist. The cost of anchoring the tanks in place will probably average about \$50 per tank. In some cases, however, particularly when the ground is sandy or rocky, such anchoring is unnecessary. Some firms merely have their tanks filled with water during the installation in order to anchor them during that period. Listed below are the tank costs and the average cost of installing these tanks below ground:

Tank (7-gauge)		Installation cost
Size	Cost	below ground
550	\$ 85	\$100
1,000	130	130
2,000	210	200
3,000	280	260
4,000	350	330
6,000	620	430

Actual installation costs vary considerably. These costs apply under average, ideal conditions and include excavation, setting of the tank, backfilling with sand

and dirt, installing a fill line with cap and a manhole with cover 1" above the ground level, and connecting the tank to the gasoline distributing lines.

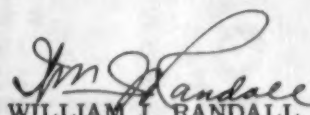
Relatively few tanks are placed above ground today. The vertical emplacement is by far the cheapest. In this instance the ground is domed and covered with a rock fill upon which the tank is set. This is the least expensive method. To set them horizontally is slightly more expensive, as concrete supports are required to hold the tanks.

LIGHTING: The cost of electric advertising signs and yard lighting varies with the type and size of the signs. Standards for flood lights and pedestal signs will average about \$100 plus \$50 for installation. Mercury lamps and transformers will average about \$80. A 4-foot neon advertising sign will run in the neighborhood of \$100, while a plain one will run about \$25. There is a \$75 charge for installing the electric signs. A 6-foot pedestal sign will run \$160, while an 8-foot sign will run approximately \$225. Again, a \$75 installation charge should be added.

EQUIPMENT: Generally the equipment furnished in a service station consists of an air compressor, a hoist, high-pressure lubricating equipment and shelving, display equipment and a desk. A 1/3 h. p. air compressor will cost approximately \$145, a 1/2 h. p. \$160, a 3/4 h. p. \$180, a 1 1/2 h. p. \$300, and a 3 h. p. \$410. Installation charges will vary from \$25 to \$75, depending on the size of the equipment. Hoists will run from \$530 to \$565 for a full hydraulic 8,000-pound hoist. Installation will cost approximately \$125. High-pressure grease equipment will average \$800 plus a \$200 installation charge. Shelving, display equipment, and desk will average from about \$300 for a small station to \$500 and even higher for the larger ones.

COST OF REMOVAL: In many instances it is necessary for the appraiser to compute the cost of removing some of the improvements. The concrete islands would cost approximately \$50 each to remove, the hoist \$50, while the tanks will cost as much to remove as it costs to install them. Concrete paving can be removed for approximately 20¢ per square foot, while 6" concrete curbs will cost 30¢ per linear foot.

We hope that some of our readers who are interested in service station appraisals will write us telling of any methods that they may have found satisfactory in the appraisal of service stations in order that we might incorporate the best of all of the methods in our subsequent bulletins that will discuss the various approaches to the valuation of a service station.


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NOTE: These costs are based on experience in the St. Louis Metropolitan Area. Construction costs in the urban sections of some cities will run as much as 15% higher, while those in rural areas may average 15% less. For deviations from these base costs see page 1 of our Building Cost Manual.